

**THE GENUS *HOMALOPTERA***  
**(OSTEICHTHYES, CYPRINIFORMES, HOMALOPTERIDAE)**  
**IN YUNNAN, CHINA**

by

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**ABSTRACT.** - Two species of *Homaloptera* are known from Yunnan : *H. yunnanensis* (Chen), originally described as a *Balitoropsis*, with 58 lateral-line scales and 7 simple and 12 branched pectoral rays, and *H. vulgaris* sp. nov. with 48-50 + 1-2 lateral line scales and 7 simple and 10 branched pectoral rays. The two species seem to be closely related each other and to *H. zollingeri* from Indonesia and the Malay Peninsula. *Balitoropsis* Smith, 1945 is briefly discussed and tentatively considered as a synonym of *Homaloptera*.

**RÉSUMÉ.** - On connaît deux espèces du genre *Homaloptera* au Yunnan : *H. yunnanensis* (Chen), originellement décrite dans le genre *Balitoropsis*, avec 58 écailles sur la ligne latérale et 7 rayons pectoraux simples et 12 ramifiés, et *H. vulgaris* sp. nov. avec 48-50 + 1-2 écailles sur la ligne latérale et 7 rayons pectoraux simples et 10 ramifiés. Les deux espèces semblent très voisines l'une de l'autre et de *H. zollingeri* d'Indonésie et de la péninsule malaise. *Balitoropsis* Smith, 1945 est brièvement mentionné et considéré comme synonyme de *Homaloptera*.

**Key-words :** *Homaloptera yunnanensis*, *Homaloptera vulgaris*, Homalopteridae, China People's Rep., New species, Taxonomy.

Homalopterine loaches are small to minute fishes (less than 120 mm) which inhabit streams with moderate to strong current, with pebbles and/or wood debris on the bottom which provide them with shelter and substrate to their preys (usually small invertebrates). They developed numerous specializations which allow them to live close to the bottom where the current is not so strong and to adhere to the substrate, like depressed body, adhesive pads on lower surface of fin rays, large paired fins and, in some lineages, fused pelvic fins. *Homaloptera* van Hasselt, 1823 is among the less specialized of them and some of its members still retain the generalized bauplan of nemacheiline loaches, their sister group. *Homaloptera* is known from Borneo, Java, Sumatra, Malay Peninsula, Thailand, Burma, India, Laos and Kampuchea. It has not yet formally been recorded from China and we describe hereunder a new species from Yunnan waters.

Counts and measurements follow Kottelat (1984), but head length is dorsal head length from tip of snout to posterior extremity of occipital.

***HOMALOPTERA VULGARIS* SP. NOV. (Fig. 1)**

**Holotype :** KIZ 788229, 38.4 mm SL ; Yunnan : Xishuangbanna : Mong Han Co. (21°50'N 101°E).

**Paratypes :** KIZ 788225-228, 4 ex., 34.0-35.7 mm SL ; same data. - KIZ 839258 and 839260, 2 ex., 47.6-49.7 mm SL ; Yunnan : Baoshan Co, Wayao (25°25'N 99°16'E), in Lancang-jian (Mekong basin).

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**Diagnosis :** A new species of *Homaloptera* distinguished by the combination of the following characters : P 7/10 ; 48-50 + 1-2 scales along lateral line ; all scales with a single keel ; body depth 13.8-15.1 % SL ; body width 13.2-13.8 % SL ; eye diameter 15-16 % HL ; interorbital width 42-46 % HL ; pectoral fins not reaching pelvic fins.

**Description :** A species of *Homaloptera* with a slightly depressed head and body. Pectoral fins reach or nearly reach pelvic fin bases. Pelvic fins just reach anus which lies about 3 eye diameters in front of anal fin. Origin of dorsal fin opposite to origin of pelvic fins ; supero-posterior edge of dorsal fin slightly concave. Caudal fin deeply forked, with lower lobe slightly longer.

Morphometric data : total length 122.3-129.1 % SL; dorsal head length 19.2-20.6 % SL (average : 20.1) ; lateral head length 18.7-20.0 % SL (19.3), 94-97 % HL (96); predorsal length 43.7-45.3 % SL (44.6) ; prepelvic length 41.2-43.9 % SL (42.7); pre-anus length 61.3-65.2 % SL (63.3); preanal length 71.4-74.7 % SL (72.5); body depth at dorsal fin origin 13.8 - 15.1 % SL (14.4), 68-76 % HL ; head depth at eye 8.1-8.9 % SL (8.5), 40-45 % HL (42); length of caudal peduncle 19.3-20.3 % SL (20.0), 96-105 % HL (99); depth of caudal peduncle 6.9-7.0% SL (7.0), 34-36 % HL (35), 2.8-2.9 (2.86) times in its length; head width 15.5-16.8 % SL (15.9), 76-83 % HL (79); body width 13.2-13.8 % SL (13.6), 64-72 % HL (68) ; snout length 9.8-11.0 % SL (10.4), 49-54 % HL (52) ; interorbital width 8.5-9.2 % SL (8.8), 42-46 % HL (44) ; eye diameter 3.0-3.2 % SL (3.1); 15-16 % HL (15.5). D 3/8 1/2 ; A 2/5 1/2 ; P 7/10 ; V 2/8 ; branched caudal rays : 8-9 + 8.

48-50 + 1-2 scales along lateral line. 6-7 scales between lateral line and dorsal origin, 7-9 between lateral line and pelvic fin base, 20 around caudal peduncle and 14-17 predorsal. All scales have a single keel.

Mouth arched. Lips smooth to very feebly pleated and continuous around the corner of mouth ; posterior lip with a wide median interruption. Three pairs of short barbels. A conspicuous preoral groove between anterior lip and rostral flap which supports rostral barbels.

**Colouration :** The type specimens are only faintly coloured, but seven dark saddles can be distinguished : two predorsal, two along dorsal base and three behind, including one at posterior extremity of caudal peduncle. Caudal fin with a blackish stripe along lower margin of lower lobe, from base of fin to about 1/2-2/3 of lobe length ; a dark mark on upper lobe. Other fins hyaline.

**Habitat :** Creeks with clear water and moderate current.

**Discussion :** The genus *Homaloptera* has been revised by Silas (1953). Since that time, a few new species have been described from the Malay Peninsula by Alfred (1967, 1969) and one from India by Indra and Remadevi (1981). Using Silas' key, our material would be *Homaloptera zollingeri* Bleeker, 1853, a species originally described from Java and now reported from Sumatra and Borneo ; it had also been reported from several localities in Western Malaysia (Silas, 1953 ; Hora, 1941a, b) but Alfred (1969) showed that only those from Negeri Sembilan (at the southern extremity of the Peninsula) are *H. zollingeri*, the others being *H. nigra* Alfred, 1969. *Homaloptera zollingeri* has been recorded from Thailand by Hora (1932) and Smith (1945), but this record seems to need confirmation by reexamination of the specimens and new collections. The new species is distinguished from *H. zollingeri* as described by Silas (1953), Alfred (1969) and Weber and de Beaufort (1916) by the following characters : 7 simple pectoral rays (vs 4-5), 48-50 + 1-2 scales along lateral line (vs 41-45). The belly in front of



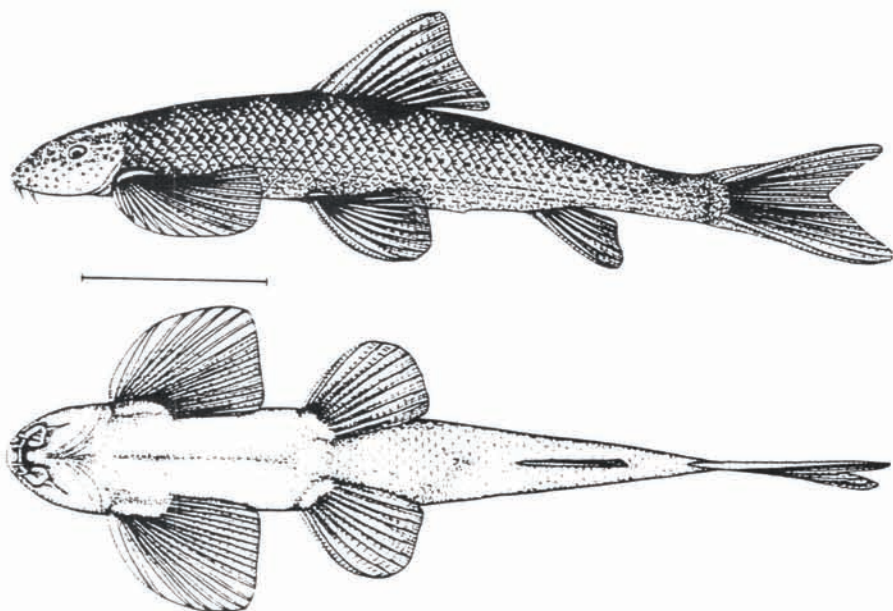


Fig. 1 : *Homaloptera vulgaris*, n. sp. KIZ 778229, holotype 38.4 mm SL. Lateral and ventral views. Scale bar : 10 mm.

posterior extremity of pelvic fins iscompletely naked while in *H. zollingeri* it is naked only between pectoral fin bases (Alfred, 1969).

*Homaloptera yunnanensis* (Chen, 1978), the only other *Homaloptera* known from Yunnan is distinguished by more lateral line scales (58, vs 48-50 + 1-2), more branched pectoral rays (12, vs 10), deeper body (16.9 % SL, vs 13.8-15.1), wider body (18.2 % SL, vs 13.2-13.8), smaller eye (12 % of lateral head length, vs 16-17), pectoral fins reaching about 2/3 of distance to pelvic fins (vs reaching or nearly reaching). *Homaloptera yunnanensis* and the new species are apparently closely related.

Other species known from Laos, North Thailand and Burma are easily distinguished as follow : *H. sexmaculata* Fowler, 1934 has 2 simple and 12-14 branched pectoral rays, *H. indochinensis* Silas, 1951 has interorbital width equal to eye diameter (2.7-2.9 times larger in the new species), *H. smithi* Hora, 1932 has 37-39 lateral line scales and a wider body, shorter head, shorter caudal peduncle and longer pectoral fins, *H. rupicola* (Prashad & Mukerji, 1929) has 5 simple pectoral rays, a longer head and thinner head, larger eye, narrower interorbital width and 42-45 lateral line scales, *H. modesta* (Vinciguerra, 1890) has, according to the original description and Silas (1953), 5-6 simple and 8 branched pectoral rays, a longer and thinner head, larger eye, thinner interorbital width, *H. bilineata* Blyth, 1860 has 64 lateral line scales, 4 simple pectoral rays and a conspicuous colour pattern.

**Etymology** : *vulgaris* (Latin), meaning common, inconspicuous, trivial, without subtility, in allusion to inconspicuous appearance and colour pattern of this species.

# *HOMALOPTERA YUNNANENSIS (CHEN)*

*Balitoropsis yunnanensis* Chen, 1978 : 334.

This species, known from the holotype only, was originally described as member of *Balitoropsis* Smith, 1945, a genus hitherto known only from the holotype of its type species, *B. bartschi* Smith, 1945. Smith (1945) distinguished *Balitoropsis* from *Homaloptera* by the presence of a deep preoral groove ; but all *Homaloptera* have a preoral groove whose depth is quite variable ; as illustrated by Smith, the shape of the mouth cannot be distinguished from the conditions existing in species like *H. orthogoniata* Vaillant, 1902, *H. bilineata*, *H. zollingeri*, etc. Examination of the holotype of *B. bartschi* will certainly show that it is a large female of *H. zollingeri* or *H. nigra*. The original illustration of *B. yunnanensis* shows a mouth construction similar to the condition in the new species described above which cannot be distinguished from the one existing in any other species of the genus.

Differences between *H. yunnanensis* and *H. vulgaris* are discussed above.

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